

WHAT IS CLAIMED IS:

1. A red eye compensation method comprising:

storing, when original image data is subjected to image processing and image data for outputting is generated and outputted, at least one of the original image data and the image data for outputting in storage means;

reading out, when an instruction was issued for red eye compensation of an image of previously outputted image data for outputting, one of the image data for outputting and corresponding original image data from said storage means; and

performing said red eye compensation on the read-out image data to regenerate the image data for outputting.

2. An image processing apparatus that performs image processing on supplied original image data and generates and outputs image data for outputting, comprising:

storage means for storing at least one of previously outputted image data for outputting and corresponding original image data in relation to identification information of an image of the previously outputted image data for outputting; and

red eye compensation means for reading out from said

storage means, when an instruction was issued for red eye compensation of the image of the previously outputted image data for outputting, the image data for outputting or the original image data carried by the image to which the instruction for the red eye compensation was issued, using the identification information of said image, and performing the red eye compensation.

3. The image processing apparatus according to claim 2,

wherein a red eye compensation mode is prepared as a processing mode, and when said red eye compensation mode is set, said red eye compensation means automatically performs the red eye compensation on one of the image data for outputting and the original image data by regarding an instruction for reading out one of the image data for outputting and the original image data using said identification information as the instruction for the red eye compensation of the image.

4. The image processing apparatus according to claim 2 further comprising:

display means for displaying an image after the red eye compensation by said red eye compensation means has

been performed, alone or together with an image before the red eye compensation is performed.

5. An image processing method for performing image processing on image data to generate output image data, comprising:

displaying on a display, a verification screen in which verification images corresponding to said image data are displayed and which doubles as means for designating a red eye frame for which red eye compensation should be performed, from among the displayed verification images;

sequentially subjecting image data of each frame which has been subjected to verification to image processing for obtaining the output image data, in response to an instruction for completing the verification of a predetermined number of frames using the verification screen and, further performing the red eye compensation on the red eye frame; and

displaying on the display, an image with which a result of the red eye compensation is confirmed, at the point in time when the red eye compensation of the red eye frame is finished and performing the image processing on a subsequent frame in response to an instruction for completing confirmation of the red eye compensation.

6. An image processing method for performing image processing on image data to generate output image data, comprising:

displaying on a display, a verification screen in which verification images corresponding to said image data are displayed and which doubles as means for designating red eye frames for which red eye compensation should be performed, from among the displayed verification images;

sequentially subjecting image data of each frame which has been subjected to verification to image processing for obtaining the output image data, in response to an instruction for completing the verification of a predetermined number of frames using the verification screen and, further performing the red eye compensation on the red eye frames; and

displaying on the display, images with which results of the red eye compensation for the individual red eye frames are confirmed, after the red eye compensation of all the red eye frames has been finished.

7. The image processing method according to claim 5,

wherein photoelectrical image capturing is performed twice through prescan and fine scan on each frame of a

photographic film to obtain the output image data, with the prescan being successively performed on each frame for one case and the fine scan being performed in units of a predetermined number of frames each time the instruction for completing the verification is issued, and

wherein the verification images are created using image data obtained as a result of the prescan, and the image processing for obtaining the output image data and the red eye compensation are performed using image data obtained as a result of the fine scan.

8. The image processing method according to claim 5,

wherein photoelectrical image capturing is performed once for each frame of a photographic film in order to obtain the output image data, and

wherein the verification images are created using image data where images obtained by the image capturing are reduced, and the image processing for obtaining the output image data and the red eye compensation are performed using image data obtained by the image capturing.

9. The image processing method according to claim 5,

wherein auxiliary information for use in judging whether or not red eye phenomenon occurs in each frame is

displayed on the verification screen.

10. The image processing method according to claim 5, wherein, the red eye compensation includes detecting red eye phenomenon from a face which has been extracted in an image and correcting the red eye phenomenon, and

wherein face extraction is performed with image data used to create the verification images and the red eye detection is performed with image data used to obtain the output image data.

11. A red eye compensation method comprising:
adding photographing information to an optically photographed image;
judging using the photographing information whether there is a possibility that red eye phenomenon occurs; and
subjecting the image to red eye compensation only when there is a possibility that the red eye phenomenon occurs.

12. The red eye compensation method according to claim 11,

wherein said photographing information is at least one of flash information, an Ev value, a shutter speed, a

stop value, a photographing mode, a camera type, lens information, a distance between a subject and a camera, a photographing time and other Exif information.

13. The red eye compensation method according to claim 11,

wherein said photographing information is added by at least one of an optical means, a magnetic means, and an electrical means at the time of photographing.

14. An image processing method comprising the steps of:

reading out image data of an optically photographed image and photographing information added to the image data;

performing preprocessing which includes at least processing for judging whether there is a possibility that specified image quality deterioration occurs, using the photographing information;

detecting the image quality deterioration in the image only when the image has a possibility that said image quality deterioration occurs; and

correcting said specified image quality deterioration that was detected in said image.

15. The image processing method according to claim 14,

wherein said photographing information is at least one of flash information, an Ev value, a shutter speed, a stop value, a photographing mode, a camera type, lens information, a distance between a subject and a camera, a photographing time and other Exif information.

16. The image processing method according to claim 14,

wherein said specified image quality deterioration is at least one of red eye, gold eye, distortion, lateral chromatic aberration, deterioration of marginal luminosity and defocusing.

17. The image processing method according to claim 14,

wherein the image data of the image is subjected to necessary image processing for print output to obtain image data for outputting, when the image was compensated for the specified image quality deterioration, when the image was judged to have no possibility that said image quality deterioration occurred, and when said image quality

deterioration was not detected in the image.

18. A printing method comprising the steps of:
 - reading out image data of an optically photographed image and photographing information added the image data;
 - performing preprocessing which includes at least processing for judging whether there is a possibility that specified image quality deterioration occurs, using the photographing information;
 - detecting the image quality deterioration in the image only when the image has a possibility that said image quality deterioration occurs;
 - correcting said specified image quality deterioration that was detected in said image;
 - subjecting the image data of the image to necessary image processing for print output to obtain image data for outputting, when the image was compensated for the specified image quality deterioration, when the image was judged to have no possibility that said image quality deterioration occurred, and when said image quality deterioration was not detected in the image; and
 - outputting an image reproduced from said obtained image data for outputting as a print.

19. A printer having a preprocessing function,
comprising:

image acquisition means for reading out image data of
an optically photographed image and photographing
information added to the image data;

preprocessing means for performing preprocessing
which includes at least processing for judging whether
there is a possibility that specified image quality
deterioration occurs, using said photographing information
of said image acquired by said image acquisition means;

image processing means for subjecting the image data
of said image acquired by said image acquisition means to
at least necessary image processing for print output to
obtain image data for outputting; and

print output processing means for outputting a
reproduced image from said image data for outputting as a
print,

wherein, when the image was judged to have a
possibility that said image quality deterioration occurred,
said preprocessing means and said image processing means
perform processing for detecting said image quality
deterioration in the image and correcting said specified
image quality deterioration that has been detected in said
image.

20. The printer according to claim 19,
 wherein said photographing information is at least one of flash information, an Ev value, a shutter speed, a stop value, a photographing mode, a camera type, lens information, a distance between a subject and a camera, a photographing time and other Exif information.

21. The printer according to claim 19,
 wherein said specified image quality deterioration is at least one of red eye, gold eye, distortion, lateral chromatic aberration, deterioration of marginal luminosity and defocusing.

22. The printer according to claim 19,
 wherein said preprocessing means performs, as preprocessing, only processing for judging whether there is a possibility that said specified image quality deterioration occurs, and

wherein, only when the image was judged to have a possibility that said image quality deterioration occurred, said image processing means performs processing for detecting said image quality deterioration in the image and correcting said specified image quality deterioration that

has been detected in said image, and when the image was compensated for said specified image quality deterioration, when the image was judged to have no possibility that said image quality deterioration occurred, and when said image quality deterioration was not detected in the image, the image data of the image is subjected to said necessary image processing.

23. The printer according to claim 19,

wherein said preprocessing means performs, as preprocessing, processing for judging whether there is a possibility that said specified image quality deterioration occurs, and processing for detecting said image quality deterioration only when the image was judged to have a possibility that said image quality deterioration occurred, and

wherein said image processing means performs the processing for correcting said specified image quality deterioration that has been detected, and subjects the image data of the image to said necessary image processing when the image was compensated for said specified image quality deterioration, when the image was judged to have no possibility that said image quality deterioration occurred, and when said image quality deterioration was not detected

in the image.

24. The printer according to claim 19,
wherein said preprocessing means performs, as
preprocessing, processing for judging whether there is a
possibility that said specified image quality deterioration
occurs, processing for detecting said image quality
deterioration of the image when the image was judged to
have a possibility that said image quality deterioration
occurred, and processing for correcting said specified
image quality deterioration that has been detected, and

wherein said image processing means subjects the
image data of the image only to said necessary image
processing when the image was compensated for said
specified image quality deterioration, when the image was
judged to have no possibility that said image quality
deterioration occurred, and when said image quality
deterioration was not detected in the image.

25. The direct printer according to claim 19,
wherein said image acquisition means directly reads
out the image data of said image and the photographing
information from a recording medium onto which the image
data of said image and the photographing information are

recorded, or from a digital camera with which said image was photographed, and

wherein said print output processing means outputs as a print a hard copy image reproduced from the image data that was read out by said image acquisition means and processed by said preprocessing means and said image processing means.